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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,249	03/09/2001	Donald Henry Willis	PU010047	7065

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EXAMINER
ANYASO, UCHENDU O

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/803,249	WILLIS ET AL.	
	Examiner	Art Unit	
	Uchendu O Anyaso	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. **Claims 1-25** are pending in this action.

Claim Rejections - 35 USC ' 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Gadeyne et al* (U.S. Patent 6,359,663) in view of *Sani et al* (U.S. 6,219,101).

Regarding independent **claims 1, 12** and **19**, and for **claims 2-7, 12-15** and **20-22,** Gadeyne teaches a method of reducing artifacts in an image display by teaching the conversion or generation of a video signal so that motion artifacts which are caused by the difference in luminance response times for rise and decay are canceled out (*see* Abstract; column 2, lines 45-51). This is accomplished by displaying images of TV pictures and/or data information on a video display system equipped with a liquid crystal display device (column 1, lines 8-13).

Furthermore, Gadeyne teaches how a video signal for a picture is converted into different levels of luminance with different rise and fall times (column 2, lines 45-67).

Furthermore, Gadeyne teaches how to combine a slew rate limit and processing delay of a video signals in order to match the processing delays and reduce artifacts by teaching how to convert a first video signal into a second video signal so that the faster

luminance response of a picture element of the first video signal is slowed down in order to match the luminance response in time and amplitude to the known slower luminance response of the same or another picture element for the opposite change of the first video signal (column 3, lines 35-42).

However, Gadeyne does not teach a low pass filter that filters the lower brightness level signal component of a video signal. On the other hand, Sani teaches this concept by teaching how to filter various luminance components of a video signal (column 1, lines 50-58; column 4, line 61 through column 5, line 48, figure 3).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Gadeyne and Sani's inventions because while Gadeyne teaches a method of reducing artifacts in an image display by teaching the conversion or generation of a video signal so that motion artifacts which are caused by the difference in luminance response times for rise and decay are canceled out (*see* Abstract; column 2, lines 45-51), Sani teaches how to filter various luminance components of a video signal (column 1, lines 50-58; column 4, line 61 through column 5, line 48, figure 3). The motivation for combining both inventions would have been to prevent flickering in a display device (column 1, lines 50-58).

Regarding **claims 8** and **9**, in further discussion of claim 1, Gadeyne teaches a value Δ that determines how the luminance will have to change during the next correction period such that luminance would rise when Δ is positive, fall when Δ is negative, and remain equal when Δ is zero (column 9, lines 1-30, figure 13 at 36-39).

Also, Sani teaches how to delay the chrominance signals of the video components (column 3, lines 20-26, figure 1A).

Regarding **claims 10, 11, 16, 17, 23** and **24**, in further discussion of claims 1 and 12, Gadeyne teaches how his invention uses gamma-correctors (35, 40) (*see* column 7, lines 22-45, figure 13 at 35, 40).

Furthermore, Gadeyne teaches how to combine a slew rate limit and processing delay of a video signals in order to match the processing delays and reduce artifacts by teaching how to convert a first video signal into a second video signal so that the faster luminance response of a picture element of the first video signal is slowed down in order to match the luminance response in time and amplitude to the known slower luminance response of the same or another picture element for the opposite change of the first video signal (column 3, lines 35-42).

Regarding **claims 18** and **25**, in further discussion of claim 12, Gadeyne teaches a method of reducing artifacts in an image display by teaching the conversion or generation of a video signal so that motion artifacts which are caused by the difference in luminance response times for rise and decay are canceled out (*see* Abstract; column 2, lines 45-51). This is accomplished by displaying images of TV pictures and/or data information on a video display system equipped with a liquid crystal display device (column 1, lines 8-13).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,936,621 to *Medin et al* for a system and method for reducing flicker on a display.

U.S. Patent 4,855,831 to *Miyamoto et al* for a video signal processing apparatus.

U.S. Patent 6,347,161 to *Mancuso* for a non-linear image filter for filtering noise.

U.S. Patent 6,429,904 to *Sani et al* for a method for converting analog video signal to digital video signal.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uchendu O. Anyaso whose telephone number is (703) 306-5934. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Uchendu O. Anyaso

11/30/2002

STEVEN SARAS
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